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Attorney Docket No.: 20174C-004960US

PATENT & TRADEMARK OFFICE
Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

On 7/26/04

TOWNSEND and TOWNSEND and CREW LLP

By: 

Tiffany Wu

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

CARL L. HANSEN et al.

Application No.: 10/810,350

Filed: March 26, 2004

For: MICROFLUIDIC PROTEIN
CRYSTALLOGRAPHY TECHNIQUES

Examiner: Not Yet Assigned

Art Unit: 1732

**INFORMATION DISCLOSURE
STATEMENT UNDER 37 CFR §1.97 and
§1.98**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. In accordance with 37 CFR §1.98(d), copies of the references can be found in Application No. 09/887,997, filed June 22, 2001 (Attorney Docket No. 20174C-004900US). It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement. However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,



Kent J. Tobin
Reg. No. 39,496

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Substitute for form 1449A/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/810,350
(use as many sheets as necessary)				Filing Date	March 26, 2004
				First Named Inventor	Hansen, Carl L.
				Art Unit	1732
				Examiner Name	Unassigned
Sheet	1	of	8	Attorney Docket Number	20174C-004960US

U.S. PATENT DOCUMENTS+					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code ² (if known)			
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	2	US-3,570,515	03-16-1971	Kinner	
	3	US-3,747,628	07-24-1973	Holster et al.	
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Sheet	2	of	8		
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		Country Code ³	Number ⁴	Kind Code ⁵ (if known)				
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	63	WO	00/60345	A1	10-12-2000			
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	67	WO	00/43748	A	07-27-2000	YSI Inc.		
	68	WO	99/00655	A	01-07-1999	Immunetics		

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	132	SCHUELLER et al., "Fabrication of glassy carbon microstructures by soft lithography," <u>Sensors and Actuators</u> , 72(2):125-139 (1999).		
	133	SHOJI et al., "Smallest Dead Volume Microvalves for Integrated Chemical Analyzing Systems," <u>Proceedings of Transducers '91</u> , 1991 International Conference on Solid-State Sensors and Actuators, pages 1052-1055 (1991).		
	134	SHOJI, S., "Fluids for Sensor Systems", <u>Topics in Current Chemistry</u> , 194:162-188 Springer Verlag Berlin Heidelberg (1998).		
	135	SMITS, J.G., "Piezoelectric Micropump with Three Valves Working Peristaltically", <u>Sensors and Actuators</u> , A21-A23:203-206 (1990).		
	136	SOHN et al., "Capacitance cytometry: Measuring biological cells one by one," <u>PNAS</u> , 97(20):10687-10690 (2000).		
	137	THOMAS et al., Distribution coefficients of Protein Impurities in Ferritin and Lysozyme Crystals Self-Purification in Microgravity, <u>Journal of Crystal Growth</u> 211 (2000), pp. 149-156.		
	138	TUFFE et al., "Silicon Diffused-Element Piezoresistive Diaphragms," <u>J. Appl. Phys.</u> , 33(11):3322-3327 (1962).		
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	140	VAN DE POL et al., "A Thermo-Pneumatic Actuation Principle for A Microminiature Pump and Other Micromechanical Devices," <u>Sensors and Actuators</u> , 17:139-143 (1989)		
	141	VAN DE POL et al., "Micro Liquid Handling Devices - A Review", <u>Micro Systems Technologies</u> , 90:799-805 (1990).		
	142	VIEIDER et al., "A Pneumatically Actuated Micro Valve with a Silicone Rubber Membrane for Integration with Fluid-Handling Systems," <u>Proceedings of Transducers '95</u> , the 8th International Conference on Solid-State Sensors and Actuators and Eurosensors IX, held in Stockholm, Sweden on 6/25-29/95, 2:284-286 (1995).		
	143	WASHIZU et al., "Molecular Dielectrophoresis of Biopolymers," <u>IEEE Transactions on Industry Applications</u> , 30(4):835-843 (1994).		
	144	WU et al., MEMS Flow Sensors for Nano-Fluidic Applications, <u>Sensors and Actuators A</u> 89, 2001, pp 152-158.		
	145	XIA et al., "Complex Optical Surfaces Formed by Replica Molding Against Elastomeric Masters," <u>Science</u> , 273:347-349 (1996).		
	146	XIA et al., "Micromolding in Capillaries: Applications in Material Science," <u>J. American Chemical Society</u> , 118:5722-5731 (1996).		
	147	XIA et al., "Micromolding of Polymers in Capillaries: Applications in Microfabrication," <u>Chemistry of Materials</u> , 8(7):1558-1567 (1996).		

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¹EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Substitute for form 1449B/PTO			Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT			<i>Application Number</i>	10/810,350
<i>(use as many sheets as necessary)</i>			<i>Filing Date</i>	March 26, 2004
			<i>First Named Inventor</i>	Hansen, Carl L.
			<i>Art Unit</i>	1732
			<i>Examiner Name</i>	Unassigned
Sheet	8	of	8	Attorney Docket Number
			20174C-004960US	

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
	148	XIA et al., "Soft Lithography," <u>Angew. Chem. Int. Ed.</u> 37:551-575 (1998).	<input type="checkbox"/> ^{T²}
	149	XP-002149046, Ullmann's Encyclopedia of Industrial Chemistry, Sixth Edition, 1999 Electronic Release, 6 pages.	<input type="checkbox"/> ^{T²}
	150	YANG et al., "A MEMS Thermopneumatic silicone Membrane Valve," <u>Proceedings of the IEEE 10th Annual Workshop of Micro Electro Mechanical Systems Workshop (MEMS '97)</u> , held 1/26-30/97 in Nagoya, Japan, pages 114-118 (1997).	<input type="checkbox"/> ^{T²}
	151	YANG et al., "A Mems Thermopneumatic Silicone Membrane Valve", Proceedings of IEEE 10 th Annual International Workshop on MicroElectro Mechanical Systems, <u>Sensors and Actuators</u> , A64(1):101-108 (1998).	<input type="checkbox"/> ^{T²}
	152	YAZDI et al., "Micromachined Inertial Sensors," <u>Proceedings of IEEE</u> , 86(8):1640-1659 (1998).	<input type="checkbox"/> ^{T²}
	153	YOUNG et al., "Contoured elastic-membrane microvalves for microfluidic network integration," <u>J. Biomechanical Engineering</u> , 121:2-6 (1999).	<input type="checkbox"/> ^{T²}
	154	ZENGERLE et al., "A Micro Membrane Pump with Electrostatic Actuation," <u>1992 IEEE Conf. on Micro Electro Mechanical Systems</u> , held 2/4-7/92 in Travemunde Germany, pgs. 19-24.	<input type="checkbox"/> ^{T²}
	155	ZENGERLE et al., "Performance Simulation of Microminiaturized Membrane Pumps," from 7th International Conference on Solid-State Sensors and Actuators held 6/7-10/93 in Yokohama Japan, pages 106-109.	<input type="checkbox"/> ^{T²}

Examiner Signature		Date Considered	
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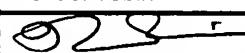
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		Application Number	10/810,350
		Filing Date	March 26, 2004
		First Named Inventor	Hansen, Carl L.
		Art Unit	1732
		Examiner Name	Not Yet Assigned
Total Number of Pages in This Submission	12	Attorney Docket Number	20174C-004960US

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Firm or Individual name	Townsend and Townsend and Crew LLP	
	Kent J. Tobin	Reg. No. 39,496
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Date	8/29/04	

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